

What is claimed is:

1. A pressure regulator for fuel cells, which is disposed in a discharge line for discharging an oxidizing agent supplied to a cathode of fuel cells, for controlling a discharged amount of the oxidizing agent to regulate the pressure of the oxidizing agent in the cathode, comprising:

an opening for passing said oxidizing agent therethrough;

a valve body for opening or closing said opening;
a resilient member for urging a rotational shaft to which said valve body is connected, to turn in a direction to open said opening;

a limiting member for limiting an angular position of the valve body which is turned by said resilient member, to keep said opening fully open; and

a motor energizable for turning said valve body in a direction to close said opening against resilient forces of said resilient member.

2. A pressure regulator for fuel cells according to claim 1, wherein said motor comprises a brushless motor.

3. A pressure regulator for fuel cells according to claim 1, wherein said motor comprises a stepping motor.

4. A pressure regulator for fuel cells according to

claim 1, wherein said rotational shaft is supported by a bearing, with a sealing member disposed between said bearing and said opening.

5 5. A pressure regulator for fuel cells according to claim 1, wherein said valve body, said rotational shaft, and/or said bearing are made of stainless steel.

10 6. A pressure regulator for fuel cells according to claim 3, wherein said rotational shaft is supported by a bearing, with a sealing member disposed between said bearing and said opening.

15 7. A pressure regulator for fuel cells according to claim 3, wherein said valve body, said rotational shaft, and/or said bearing are made of stainless steel.

20 8. A pressure regulator for fuel cells according to claim 1, wherein said pressure regulator is incorporated in a fuel cell system including a fuel cell stack having an anode and a cathode;

 said pressure regulator is disposed in a discharger for discharging the oxidizing agent supplied to said cathode; and

25 wherein for increasing the pressure of the oxidizing agent supplied to said cathode, said motor is energized to displace said valve body in the direction to close said

opening.

9. A pressure regulator for fuel cells according to
claim 8, wherein said fuel cell system is mounted on
vehicles including automobiles.

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